Claims

[c1] 1. A floating window, suitable for use in a flatbed scanner, wherein the flatbed scanner comprises at least a top lid having an opening therein and an optical scan module, and the optical scan module periodically shifts under the opening, the floating window comprising:

a transparent flat panel, disposed under the opening and having a top surface and an opposing bottom surface;

a supporting member, located on a surface of the top lid, the supporting member having a supporting surface which is in contact with a periphery of the bottom surface of the transparent flat panel;

a limiting member, located on the surface of the top lid, the limiting member having a limiting surface disposed on a periphery of the top surface of the transparent flat panel; and

a flexible member, disposed between the top surface and the limiting surface, wherein when the optical scan module pushes the bottom surface of the transparent flat panel upward, the flexible member presses the top surface of the transparent flat panel downward accordingly.

[c2] 2. The floating window according to claim 1, wherein the optical scan module comprises a pushing device disposed on top of the optical scan module, such that the optical scan module pushes the transparent flat panel upward via the pushing device.

[c3] 3. The floating window according to claim 2, wherein the pushing device slides under the bottom surface of the transparent flat panel.

[c4] 4. The floating window according to claim 2, wherein the pushing device rolling horizontally under the bottom surface of the transparent flat panel.

[c5] 5. The floating window according to claim 2, wherein the transparent flat panel extends to a region beyond the opening, while the moving area of the pushing device includes a part of the region beyond the opening.

[c6] 6. The floating window according to claim 1, wherein the supporting member is integrally formed with the surface of the top lid.

[c7] 7. The floating window according to claim 1, wherein the limiting member is integrally formed with the surface of the top lid.

[c8] 8. A floating window, applicable to a flatbed scanner which comprises at least a top lid and an optical scan module, wherein the top lid has an opening therein, and the optical scan module periodically moves under the opening, the floating window comprising:
a transparent flat panel, located under the opening and having a top surface and an opposing bottom surface;
a flexible member, located between a periphery of the top surface of the transparent flat panel and a bottom wall surrounding the opening of the top lid, wherein the optical scan module pushes the bottom surface of the transparent flat panel upward.

[c9] 9. The floating window according to claim 8, wherein the optical scan module comprises a pushing device disposed on top of the optical scan module, such that the optical scan module pushes the transparent flat panel upward via the pushing device.

[c10] 10. The floating window according to claim 9, wherein the pushing device slides under the bottom surface of the transparent flat panel.

[c11] 11. The floating window according to claim 9, wherein the pushing device rolls horizontally under the bottom surface of the transparent flat panel.

[c12] 12. The floating window according to claim 9, wherein the transparent flat panel extends to a region beyond the opening, while the moving area of the pushing device includes a part of the region beyond the opening.

[c13] 13. A floating window, suitable for use in a flatbed scanner, wherein the flatbed scanner comprises at least a top lid having an opening therein and an optical scan module, and the optical scan module periodically shifts under the opening, the floating window comprising:
a transparent flat panel, disposed under the opening and having a top surface and an opposing bottom surface;
a supporting member, located on a surface of the top lid, the supporting

member having a supporting surface which is in contact with a periphery of the bottom surface of the transparent flat panel; and

a limiting member, located on the surface of the top lid, the limiting member having a limiting surface disposed on a periphery of the top surface of the transparent flat panel wherein a distance between the supporting surface and the limiting surface is slightly larger than a thickness of the transparent flat panel to allow the transparent flat panel to move vertically, and the optical scan module is allowed to push the bottom surface of the transparent flat panel upward.

[c14] 14. The floating window according to claim 13, wherein the optical scan module comprises a pushing device disposed on top of the optical scan module, such that the optical scan module pushes the transparent flat panel upward via the pushing device.

[c15] 15. The floating window according to claim 14, wherein the pushing device slides under the bottom surface of the transparent flat panel.

[c16] 16. The floating window according to claim 14, wherein the pushing device rolls horizontally under the bottom surface of the transparent flat panel.

[c17] 17. The floating window according to claim 14, wherein the transparent flat panel extends to a region beyond the opening, while the moving area of the pushing device includes a part of the region beyond the opening.

[c18] 18. The floating window according to claim 13, wherein the supporting member is integrally formed with the surface of the top lid.

[c19] 19. The floating window according to claim 13, wherein the limiting member is integrally formed with the surface of the top lid.